CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/KRIDL/W.No.13/BC/Shape.T/2017-18 11.01.2018

TEST REPORT ON FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

*** Customer**	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Technical Manager (West),** KRIDL, Bangalore.
*** Name of Work**	:	Improvements to Roads and asphalting at pipeline road right side and other roads in Mllasandra Ward No.13 in Shettyhalli Sub Division, BBMP, Bangalore.
*** Reference**	:	BBMP/EE/DD/WO/146/2017-18 Dated: 21.12.2017
*** Sample ID**	:	Hot Mix Plant, Bangalore
Technical Reference	:	IS : 2386(Part -1)-1963 (RA-2011)
*** Type of Mix**	:	Bituminous Macadam
Date of Testing	:	11.01.2018

Sl.No.	Description	Result
1	Flakiness Index	12.60%
2	Elongation Index	13.20%
3	Combined Flakiness & Elongation Index	25.80%

*Information is furnished by the Customer/Representative.

Comments:

→ Maximum allowable Flakiness & Elongation Index for Bituminous Macadam is 30%

Note:

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⇒The results indicated above are based on the tests carried out on the samples received in th

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

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AE-13

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ಶಕ್ತಿಗಣಪತಿನಗರ, ಬೆಂಗಳೂರು

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Job No: CTCE/BBMP/KRIDL/W.No.13/BM/Stripping/2017-18

12.01.2018

TEST REPORT ON STRIPPING VALUE OF ROAD AGGREGATE (STATIC IMMERSION TEST)

*** Customer**	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Technical Manager (West),** KRIDL, Bangalore.
*** Name of work**	:	Improvements to Roads and asphalting at pipeline road right side and other roads in Mllasandra Ward No.13 in Shettyhalli Sub Division, BBMP, Bangalore.
*** Reference**	:	BBMP/EE/DD/WO/146/2017-18 Dated: 21.12.2017
Technical reference	:	IS: 6241
*** Type of Mix**	:	Bituminous Macadam
Date of Testing	:	12.01.2018

Type of binder	: 60/70
Percentage of binder used	: 5.0% by wt.
Total weight of aggregate	: 200 g
Total weight of binder	: 10.0 g
Temperature of water-bath	: 40° C

Observation Number	Stripping, Percentage	Average, Percentage	Average Retained Coating, %
1	3.1	3.20	96.80
2	3.3		
3	3.2		

*Information is furnished by the Customer/Representative.

Comments:

→ Minimum allowable Aggregate retained coating for Bituminous Macadam is 95%

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AE-13

ನಗರಾಭಿವೃದ್ಧಿ ಕಾಮಗಾರಿಗಳ ಅಭಿಯಂತರರು
ಪೆಟ್ಟಣ್ಣ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
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Job No: CTCE/BBMP/KRIDL/W.No.13/BM/Sp_Wa/2017-18 12.01.2018

TEST REEPORT ON SPECIFIC GRAVITY AND WATER ABSORPTION

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	:	Improvements to Roads and asphalting at pipeline road right side and other roads in Mllasandra Ward No.13 in Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/146/2017-18 Dated: 21.12.2017
Technical reference	:	IS : 2386(Part -3)-1963 (RA-2011)
* Type of Mix	:	Bituminous Macadam
Date of Testing	:	12.01.2018

Sl. No.	Details	Notation	Test Number			Mean Value
			Test 1	Test 2	Test 2	
1	Weight of aggregate suspended in water with the basket	W_1 g	2005	2006	2007	
2	Weight of basket suspended in water	W_2 g	750	750	750	
3	Weight of saturated aggregate in water	$(W_1 - W_2) = W_s$ g	1255	1256	1257	
4	Weight of saturated surface dry aggregate in air	W_3 g	2004	2005	2006	
5	Weight of water equal to the volume of the aggregate	$(W_3 - W_S)$ g	749	749	749	
6	Weight of oven dried aggregate	W_4 g	1993	1994	1995	
7	Specific Gravity	$W_4/(W_3-W_S)$	2.661	2.662	2.664	2.662
8	Apparent Specific gravity	$W_4/(W_4-W_S)$	2.701	2.702	2.703	2.702
9	Water Absorption	$((W_3-W_4)*100)/W_4$	0.55%	0.55%	0.55%	0.55%

*Information is furnished by the Customer/Representative.

Comments:

→ Maximum allowable Aggregate Water absorption value for Bituminous Macadam is 2.0%

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Job No.: CTCE/BBMP/KRIDL/W.No.13/BM/Bitumen/2017-18

12.01.2018

TEST REPORT ON BITUMEN CONTENT DETERMINATION OF BITUMINOUS MACADAM MIX

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of work	:	Improvements to Roads and asphalting at pipeline road right side and other roads in Mllasandra Ward No.13 in Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/146/2017-18 Dated: 21.12.2017
* Sample ID	:	Road at pipeline road right side Mallasandra Ward No.13
Technical Reference	:	IRC:SP:11-1984
Date of Testing	:	12.01.2018

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	482	482
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	18	18.00
7. Bitumen content in %	3.60	3.60
8. Average	**3.60**	

*Information is furnished by the Customer/Representative.

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